

REMARKS

An Excess Claim Fee Payment Letter for an excess claims is being filed concurrently herewith.

Claims 1-32 are all the claims presently pending in the application. New dependent claims 28-32 have been added to more completely define the invention.

Claims 1-25 and 27-28 stand rejected on prior art grounds. Applicant gratefully acknowledges the Examiner's indication that claim 26 would be allowable if rewritten in independent form. Claim 26 has been rewritten accordingly to place it in condition for immediate allowance.

With respect to the prior art rejections, claims 1, 12, 15-18, and 27-28 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Hanson (U.S. Patent No. 6,016,336). Claims 2-9 and 21-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hanson in view of Polcyn, et al. (U.S. Patent No. 6,061,433). Claims 10 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hanson in view of Wu (U.S. Patent No. 6,173,042). Claims 13 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hanson in view of Csaszar, et al. (U.S. Patent No. 5,970,124). Claim 19 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Hanson in view of Wolf (U.S. Patent No. 5,737,393). Claim 20 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Hanson in view of Juster (U.S. Patent No. 5,724,406). Claims 24 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hanson in view of Wu.

These rejections are respectfully traversed in view of the following discussion.

Attached hereto is a marked-up version of the changes made to the claims by the current

Amendment.

It is noted that the claim amendments herein are made only for more particularly pointing out the invention for the Examiner, and not for distinguishing the invention over the prior art, narrowing the claims, or for any statutory requirements of patentability.

It is noted that, notwithstanding any claim amendments made herein, Applicant's intent is to encompass equivalents of all claim elements, even if amended herein or later during prosecution.

## I. THE CLAIMED INVENTION

Applicant's invention, as disclosed and claimed (e.g., see independent claims 1 and 16), is directed to a method (and system) for personalizing an interactive voice response (IVR) system to reduce a number of key sequences to reach a desired source of information, includes storing a caller profile, and retrieving the caller's profile to construct a personalized IVR dialogue menu and play out the personalized menu.

Independent claim 28 is directed to a signal bearing medium incorporating the above method.

With such unique and unobvious features and aspects of the invention, the problems associated with an IVR system using a standard hierarchical menu are solved.

That is, in a first, non-limiting embodiment of the present invention, once a caller is identified by the IVR system, the caller is presented with a personalized voice menu so that the caller can go to the desired destination via shortcuts provided by the IVR system. The personalized voice menu can be specified by the caller for example, via the touch-tone telephone

or via a browser and the World Wide Web (WWW). After receiving callers' specifications, a list of shortcuts to the desired destinations are provided in the personalized dialogue menu.

In another non-limiting embodiment of the present invention, the IVR system may also track the caller's access patterns. A set of personalized menus are presented to a caller based on the caller's past access patterns.

A caller to such a personalized IVR system can access the desired information from the menu more quickly and efficiently according to the caller's personal interests. Besides the default standard system menu, the caller is also presented with a list of personalized shortcuts to go to the caller's desired destinations without the typical lengthy and time-consuming interactions with the IVR system.

Such features are not taught or suggested by any other prior art of record, either alone or in combination.

## II. THE PRIOR ART REJECTIONS

### A. The §102 (e) Rejection based on Hanson

Hanson discloses an interactive voice response system with call trainable routing. Regarding claim 1, Hanson teaches the idea of specifically using only the "most recent menu" selection made by the caller and playing it back to the user.

Hanson does not teach or suggest the general concept of constructing a personalized menu, defined by the user or constructed by the system using other available user profile

information.

In complete contrast, independent claim 1 uses the caller's profile to construct a personalized dialogue menu and then plays out the personalized menu. For example, the personalized menu may be defined by the caller himself/herself and may not be the most recent menu selection made by the caller.

Regarding claim 12, Hanson teaches inserting a message asking the user to decide whether or not to update the caller's usage history, or to retain the previous selection. This is far different from the insertion of a personalized sub-menu, as in claim 12 of the present application, where the sub-menu is used to provide a hierarchical tree menu allowing the caller to choose user-defined shortcuts or system-analyzed shortcuts. Indeed, it has nothing to do with updating caller's usage history.

Regarding claim 15, the timing of retrieving is not necessarily taught or suggested in Hanson, let alone what is retrieved by the claimed invention. That is, for example, Hanson retrieves the most recent menu selection made by the caller, whereas claim 15 may retrieve a user-defined or system-analyzed menu.

Regarding claim 16, even assuming that Hanson uses a storage unit to store user profile and a retrieval unit to retrieve menu and play back the retrieved menu, what is stored and what is retrieved are different. Hanson only uses the most recent selection as the alternative menu to be played back. In contrast, claim 16 allows a more sophisticated personalized menu, which may be defined by the user or constructed by the system.

Regarding claim 17, similar to the discussion above regarding claim 15, even assuming arguendo that the timing of retrieval may be similar, what is retrieved is different.

Regarding claims 18 and 27, the retrieval unit of Hanson's and that of the present invention may be similarly interfaced with the PSTN and other networks, but the end points can be substantially different. As a result, the applications can be quite different. For example, the end points in Hanson's are phone extensions to operators. In contrast, the end points in the present invention can be a Web server on the Internet.

In view of the foregoing, claims 1, 12, 15-18, 27 and 28 are neither anticipated nor, for that matter, rendered obvious by Hanson.

#### **B. The §103 Rejection of Claims 2-9 and 21-23 Based on Hanson Over Polcyn**

Regarding claim 2, the deficiencies of Hanson have been clearly discussed above. Polcyn fails to make up for the deficiencies thereof.

Specifically, Polcyn teaches transferring incoming calls directly to the applications (e.g., such as savings balance, stock balance and checking balance as disclosed in column 5, line 15 et seq. of Polcyn). The intermediate interactive steps are completely eliminated. This is different from the personalized menu disclosed in the present invention, where some intermediate interactive steps may still be allowed, if the caller decides to do so.

Hence, given the completely different problems addressed by both Hanson and Polcyn, let alone those to which the present invention aims to solve, and given the fundamentally different

solutions offered by Hanson and Polcyn to address these disparate problems, there would have been no motivation to combine Hanson with Polcyn, absent impermissible hindsight, and even assuming that the combination would have been made, the present invention as defined by claim 2 would not have resulted.

Regarding claim 3, again because Polcyn only allows the caller to go directly to the applications or to listen to the standard menu, it is far different from the personalized menu disclosed in the present invention. Hence, combining Hanson and Polcyn (arguendo) would not teach or suggest claim 3.

Regarding claim 4, the purpose of tracking the access pattern in Polcyn is to track the usage of the final applications, not the paths to those applications. Hence, the options provided to the caller in Polcyn is limited to either a final application or the standard menu. Hence, combining Hanson and Polcyn does not teach or suggest claim 4.

Regarding claim 5, again because Polcyn only allows the tracking of applications, not paths to those applications, it would only use the most recently used application as a menu option. This will be quite different from the present invention. Hence, combining Hanson with Polcyn (arguendo) does not teach or suggest claim 5.

Regarding claim 6, again because Polcyn only allows the tacking of applications, not paths to those applications, the menu choice would be limited to the most recently used application. Hence, combining Hanson and Polcyn (arguendo) does not teach or suggest claim 6.

Regarding claim 7, even though the personalized menu can be specified via a phone by

combining Hanson and Polcyn (arguendo), what is personalized is different from the present invention. Again, Polcyn focuses on the applications while the present invention allows many more alternatives for a personalized menu. Hence, combining Hanson and Polcyn does not teach or suggest claim 7.

Regarding claim 8, even though the personalized menu may be specified via the network by combining Hanson and Polcyn, the personalized menu is quite different from the present invention. Again, Polcyn only focuses on the applications while the present invention allows many more alternatives for a personalized menu. Hence, combining Hanson and Polcyn does not teach or suggest claim 8.

Regarding claim 21, the “usage history information” in Polcyn is different from the “access patterns” of the present invention.

That is, in Polcyn, only the applications are used, not the paths to the applications. In contrast, the access patterns of the present invention can include both applications and paths to those applications. Hence, combining Hanson and Polcyn does not teach or suggest claim 21.

Regarding claim 22, Polcyn provides a shortcut directly to the application. In contrast, a shortcut to the path to an application can be provided in the present invention. Hence, certain interactions are allowed as a result. Hence, combining Hanson and Polcyn (arguendo) would not teach or suggest claim 22.

Regarding claim 23, the direct access option provided in the personalized menu of the present invention is based on the input key sequences (which is the path) and other information

logged. In contrast, only the most recently used application, not the path or sub path, will be provided as the direct access option. Hence, combining Hanson and Polcyn does not teach or suggest claim 23.

In view of the foregoing, claims 2-9 and 21-23 are not rendered obvious by Hanson in view of Polcyn.

### **C. The §103 Rejection based on Hanson over Wu**

Regarding claim 10, the deficiencies of Hanson have been clearly discussed above. Wu fails to make up for the deficiencies thereof.

Wu teaches displaying the IVR menu on a computer so that a user can interact with the IVR via a computer. Wu fails to teach or suggest anything whatsoever about a method of changing the IVR menu on the computer, let alone allowing a user to specify personalized menu. As discussed at length above, Hanson only teaches retrieving the most recent menu selection made by a caller. Therefore, combining Hanson with Wu does not teach or suggest claim 10.

Regarding claim 11, Hanson teaches a hierarchical menu of call routing options. These call routing options are for the operators to answer caller's questions. They are not menu choices for the callers.

Thus, the Examiner's urged combination of Hanson in view of Wu fails to teach or suggest claims 10 and 11.

#### **D. The §103 Rejection based on Hanson over Csaszar**

Regarding claim 13, because Hanson only teaches the use of the most recent menu, the advertisement insertion based on the combined teachings of Hanson and Csaszar would only guarantee not to replay the most recent advertisement.

However, it could not guarantee not to repeat any advertisement that has been played prior to the last. Furthermore, the ad insertion point of the present invention can be in multiple places along the personalized menu. Thus, even combining (arguendo) Hanson and Csaszar does not teach or suggest claim 13.

Regarding claim 14, the grade menu of Csaszar is a standard menu, not a personalized menu as in the present invention.

Thus, the Examiner's urged combination of Hanson in view of Csaszar fails to teach or suggest claims 13 and 14.

#### **E. The §103 Rejection based on Hanson over Wolf or Juster**

Regarding claim 19, Wolf teaches a script-based voice mail voice response system. However, it does not teach a configurable menu via the system for personalized IVR menu. As clearly discussed above, Hanson only uses the most recent menu selection made by a caller. Hence, combining Hanson and Wolf does not teach or suggest claim 19.

Regarding claim 20, Juster (5,724,406) teaches a call processing system and method for providing a variety of messaging services. However, it does not teach the logic to reduce the key

sequences to reach a destination of an IVR system. Hanson teaches using only the most recent menu selection made by a caller. Hence, combining Hanson and Juster does not teach or suggest claim 20.

In view of the foregoing, claims 19 and 20 are not rendered obvious by Hanson in view of Wolf or Juster.

#### **F. The §103 Rejection of claims 24-25 based on Hanson over Wu**

Regarding claim 24, Wu teaches displaying a standard menu on a computer system and allowing a user to select a plurality of destinations that the user wishes to access. It does not teach or suggest the concept of allowing personalized menu to be displayed on the computer. Hence, combining Hanson with Wu does not teach or suggest claim 24.

Regarding claim 25, Wu teaches a PC to display a standard IVR menu, and allowing a user to choose one or more destinations on the display. These choices are then converted into access paths to an IVR system. There is no collection of access patterns or other usage information related to each user. Hence, menu selection is not personalized as in the present invention. Hence, combining Hanson and Wu does not teach or suggest claim 25.

In view of the foregoing, claims 24 and 25 are not rendered obvious by Hanson in view of Wu.

Thus, the claimed invention clearly distinguishes over Hanson, either alone or in combination with any of Polcyn et al., Csaszar et al., Wu, Wolf, and Juster.

Turning to the claim language there is no teaching or suggestion of independent claim 1 which recites “[a] method for personalizing an interactive voice response (IVR) system to reduce a number of key sequences to reach a desired source of information, comprising:

storing a caller profile; and

retrieving the caller's profile to construct a personalized IVR dialogue menu and play out the personalized menu (emphasis Applicant's).

For all of the reasons stated above, the claimed invention is fully patentable over the cited references.

Further, the other prior art of record has been reviewed, but it too even in combination with Hanson, Polcyn et al., Csaszar et al., Wu, Wolf, and/or Juster, fails to teach or suggest the claimed invention.

### **III. FORMAL MATTERS AND CONCLUSION**

Claim 28 has been amended to overcome the Examiner's objection thereto.

In view of the foregoing, Applicant submits that claims 1-32, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to

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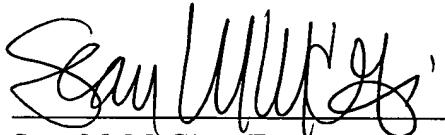
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discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

Respectfully Submitted,

Date: 7/10/02



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**VERSION SHOWING MARKINGS MADE**

**IN THE CLAIMS:**

26. (Amended) [The system according to claim 19,] A system for personalizing an interactive voice response (IVR) system to reduce a number of key sequences to reach a desired source of information, comprising:

a storage for storing a caller profile; and

a retrieval unit for retrieving the caller's profile to construct a personalized IVR dialogue menu and play-out the personalized menu, wherein said retrieval unit is selectively interfaced with a network and a public switch telephone network (PSTN),

wherein said retrieval unit includes:

a telephone interface module for selectively interfacing with said PSTN and for selectively receiving a predetermined tone and a voice input from said caller via the PSTN,

said telephone interface module selectively transmitting at least one of synthesized and stored voice messages to said caller via the PSTN,

wherein said personalized IVR dialogue menu is configurable by said caller through the PSTN via said telephone interface module,

wherein said retrieval unit further includes:

a network interface module for communicating with external systems via the network to retrieve information for the IVR system to playback via said telephone interface module,

wherein said network interface module presents a configurable menu to the caller via the network for the caller to specify the caller's personalized dialogue menu,

wherein the network interface module parses text messages into a predetermined format such that the parsed text messages are used to interact with the caller through said telephone interface module.

28. (Amended) A signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform a [method for] method for personalizing an interactive voice response (IVR) system to reduce a number of key sequences to reach a desired source of information, said method comprising:

storing a caller profile; and

retrieving the caller's profile to construct a personalized IVR dialogue menu and play out the personalized menu.